REMARKS

Applicants respectfully request further examination and reconsideration in view of the arguments set forth fully below. In the Final Office Action mailed October 10, 2006, Claims 1-3, 5-19 and 21-22 have been rejected. In response, the Applicants have submitted the following remarks. Accordingly, Claims 1-3, 5-19, and 21-22 are still pending. Favorable reconsideration is respectfully requested in view of the remarks below.

Rejections Under 35 USC §103

Claims 1-3, 5-9 and 21-22 have been rejected under 35 USC §103(a) as being unpatentable over U.S. Patent No. 5,732,401 to Conway (hereinafter Conway), in view of U.S. Patent No. 5,801,943 to Nasburg (hereinafter Nasburg). The applicants respectfully disagree with this rejection.

As discussed in a previous Office Action response, Conway teaches a system for tracking costs of medical procedures by monitoring the movements of personnel, supplies and equipment and processing data on these movements to produce detailed and accurate cost accounting records associated with particular services rendered (Conway, abstract).

Within the Office Action, the Examiner likens a method of assessing patient flow through care units of a hospital as a "caregiver". While the Applicant realizes that the care units of a hospital are recited in the preamble of the claim, the Examiner's likening of caregiver to care units of a hospital is misapplied, and shows the Examiner's misapplication of the Conway reference to the application of the present invention. Referring to Figure 1, section A of the flow chart on Figure 1 indicates some examples of each unit of a medical facility, such as what units patients are admitted to, which units patients transfer from/to, average length of stay in each unit, number of beds in each unit, and the number of staff in each unit, etc. Hence, "caregiver" as discussed and described in the Conway reference is not analogous to the care units of a hospital as presented in the present invention.

Following, and still referring to Figure 1 and the Office Action, the Examiner states that "assigning an hourly cost to each care unit for each patient" as claimed in claim 1 of the present invention is taught in Conway, column 10, lines 3-20, and column 2, lines 34-45 and column 2, lines 24-67. The Applicants respectfully disagree with this reading of Conway, and point out once again that Conway is merely recording a caregiver's time and calculating an hourly cost figure based on that time and stored salary data (Conway, column 2, lines 24-28, 42-45, 50-52, and 64-66). As described in the cited passages of Conway, Conway merely teaches a tracking (as stated in the title) of the costs related to doctors and other caregivers being in particular rooms in a hospital and treating patients. The system and method of the present invention is a forecasting system that first assigns an hourly cost to each care unit (e.g., what unit patients are admitted to, which units patients transfer from/to, average length of stay in each unit, number of beds in each unit, and number of staff in each unit, etc.) and builds a model and forecasts costs associated with that particular hospital.

Within the Office Action, it is also stated that Conway fails to teach simulating the flow of patients through the hospital using the model wherein the simulating step utilizes the collected data and using the model and the result of the simulating steps to recommend hospital resources changes.

The Nasburg reference teaches a traffic surveillance and simulation apparatus. The system applies to large road networks, and employs smart sensors to identify plural individual vehicles in the network (Nasburg, abstract). While the Nasburg reference teaches the ability to predict kinematic behaviors of all vehicles in an interchange (Nasburg, column 8, lines 7-8), Nasburg does not teach utilizing a model based on collected data and hourly costs, and using the model and the results of the simulating steps to recommend hospital resources changes. Furthermore, referring back to Conway, the passages cited by the Examiner do not teach building a model to forecast based on collected data and the estimated hourly costs as discussed above.

As described in the present invention, building a model based upon the collected data and hourly cost includes the model being preferably generated by a specialist, that

could alternatively be generated automatically using a model generation program. The building step preferably includes a multi-level model of the key hospital care units, and then describing each unit in terms of numbers of monitored beds or other resources in an average length of stay. Beginning at the admission source point, one would assign the percentage of patients that go to each unit, and each care unit, in turn, is further described by the percentage of patients going to other care units, wherein the end point is discharge. The simulation will be started at the admission start point by describing the number of patients to be admitted per unit time and the length of time to run the model. The model will then generate patient flow according to each unit in a path in that units assigned characteristics (present invention, page 5, line 13 through page 6, line 13). Nowhere in Nasburg or Conway is it taught to run a simulation based on a model utilizing an average of the collected data. Following, Conway and Nasburg then cannot teach using the model to simulate the flow of patients through the hospital. In short, Conway merely teaches a system for tracking actual costs and medical procedures in a medical facility, and Nasburg merely teaches a traffic forecaster that cannot receive cost information and produce results to recommend hospital resource changes.

Applicant respectfully suggests that in the outstanding action, the rejections evidence picking and choosing features of various references and combining them when there is no suggestion in those references to do so. It is impermissible within the framework of a 35 U.S.C. § 103 rejection to pick and choose from any one reference only so much of it as will support a given position to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one skilled in the art. Furthermore, obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting the combination. Teachings of references can only be combined if there is some suggestion or incentive to do so. These two references, taken either alone or in combination, fail to disclose or suggest the invention as now recited. Furthermore, these references actually teach away from the combination. The Conway reference is an activity-based cost tracking system implemented in a medical environment, while the Nasburg reference is a

traffic surveillance and simulation apparatus. The apparatus of the Nasburg reference cannot utilize a model including collected medical data and costs. Specifically, the Nasburg reference has no teaching of the ability to receive cost data and run a simulation on the same. Therefore, even if the reference cited by the Examiner suggested some motivation for combination, which it does not, the system created by the combination of the Conway and Nasburg reference could not utilize collected data and cost information and simulate, using the model to recommend hospital resource changes.

The independent Claim 1 is directed toward a method of assessing patient flow through care units of a hospital using a computer having a microprocessor comprising collecting a set of hospital statistical data, assigning an hourly cost to each care unit for each patient, building a model based upon the collected data and hourly cost, simulating the flow of patients through the hospital using the model, wherein the simulating step utilizes the collected data and using the model and the results of the simulating step to recommend hospital resource changes. As described above, neither Conway, Nasburg nor their combination teach simulating the flow of patients through the hospital using the model, wherein the model is based on collected data and hourly costs, and further wherein the simulating step utilizes an average of the collected data, and using the model and the results of the simulating step to recommend hospital resource changes. For at least these reasons, the independent Claim 1 is allowable over the teachings of Conway, Nasburg and their combination.

Claims 2-3 and 5-15 are dependent upon the independent Claim 1. As discussed above, the independent Claim 1 is allowable over the teachings of Conway, Nasburg and their combination. Accordingly, Claims 2-3 and 5-15 are also allowable as being dependant upon an allowable base claim.

The independent Claim 16 is directed to a computer system for modeling patient flow through care units of a hospital comprising a collection configured to accept a set of hospital statistical data, an assignment module configured to assign an hourly cost to each unit for each patient, a model module configured to build a model of the flow of patients through the hospital, a simulation module configured to simulate the flow of patients

through the hospital, wherein the simulation module utilizes the set of hospital statistical data and a resource module configured to determine a resource utilization of the hospital by utilizing the model and the output of the simulation module. As described above, neither Conway, Nasburg nor their combination teach a simulation module, wherein the simulation utilizes collected data and hourly costs and further wherein the simulation module utilizes an average of the data, and a resource module configured to determine a resource utilization of the hospital by utilizing the model and the output of the simulation module. For at least these reasons, the independent Claim 16 is allowable over the teachings of Conway, Nasburg and their combination.

Claims 17 -19 and 21-22 depend upon the independent Claim 16. As described above, the independent Claim 16 is allowable over the teachings of Conway, Nasburg and their combination. Accordingly, Claims 17-19 and 21-22 are also allowable as being dependent upon an allowable base claim.

For these reasons, applicants respectfully submit that all the claims are now in a condition for allowance, and allowance at an early date would be appreciated. Should the examiner have any questions or comments, they are encouraged to call the undersigned at 414-271-7590 to discuss the same so that any outstanding issues can be expeditiously resolved.

Respectfully submitted,

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